Unmoderated Posters
Stones and Endourology

UP-66
Novel Urinary Marker Expression Associated with Shock Wave Lithotripsy

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Introduction and Objectives: Shockwave lithotripsy (SWL) is a minimally invasive treatment alternative for kidney stones. Although less invasive, SWL subjects the renal parenchyma to a high level of energy potentially causing renal injury. To date, not all kidney injuries caused by SWL can be reliably detected by conventional imaging techniques. Kidney Injury Molecule-1 (KIM-1) and N-acetyl-glucosaminidase (NAG) are 2 proteins secreted by the kidney into urine and found to be sensitive markers of acute kidney injury in transplant patients. The aim of this work was to evaluate the urinary levels of KIM-1 and NAG in kidney stone patients treated by SWL.

Methods: Voided urine samples were collected before, 2 hours, 2 days and 2 weeks post-SWL treatment. Patients having ureteric or radiolucent stones, ureteric stents, elevated creatinine or UTI were excluded. KIM-1 was measured by microbead based assay on Luminex. NAG was measured by spectrophotometry based enzymatic assay. KIM-1 and NAG values are reported as a normalized ratio to urinary creatinine.

Results: 23 patients with a mean age of 55 (range 36 to 74) years were included. Stone size ranged from 5 to 16 mm (mean 7.9 mm). Mean KIM-1 and NAG levels pre-SWL were 6.8 pg/ml and 2.9 mU/ml. At 2 hours post-SWL these levels increased significantly to 11.7 pg/ml and 4.8 mU/ml. Mean NAG levels returned to baseline at 2 days post-SWL and KIM-1 at 2 weeks.

Conclusions: KIM-1 and NAG levels significantly increased post-treatment suggesting these novel markers may have a potential role in identifying tissue injury post-SWL.

2013 CUA ABSTRACTS

Unmoderated Posters
Technology and Instruments

UP-67
A Novel Technique in Placement of the Morbidly Obese in Lithotomy Position

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Introduction and Objectives: There is a rising prevalence of morbid and extremely-morbid obesity (BMI >50) in North America. Moreover, morbid obesity is associated with increased incidence of nephrolithiasis with less successful treatment options. Theoretically, retrograde reno-ureteroscopy is done more frequently in Extreme-morbidly obese (EMO) patients. Nevertheless, special instruments, stirrups and operating tables for EMO patients are expensive and may not be available in most operating rooms. We propose a fast and safe method in placing EMO patients in lithotomy position using regular operating room tables. This technique can be used for patients with extensive leg size or weight that cannot be put in stirrups for lithotomy position.

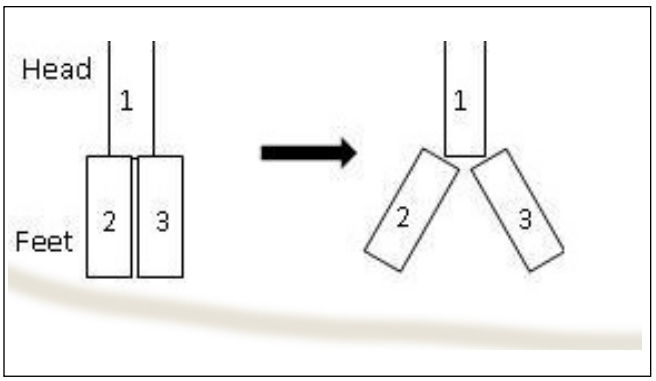

Fig. 1. UP-67.